

Appln No. 10/660,452
Amdt date February 19, 2008
Reply to Office action of October 17, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) An intervertebral disk prosthesis, comprising:
 - a base plate;
 - a top plate opposite the base plate; and
 - an intervening core between said top plate and base plate, wherein at least one of the plates has on the side facing the core a first concave contact face and the core has at least one adjacent first convex contact face, characterized in that encircling one of the contact faces is a first groove in which an elastic first ring which contacts the opposite contact face is embedded.
2. (Withdrawn) The intervertebral disk prosthesis according to claim 1, wherein the opposite contact face has a second groove encircling the contact face which engages the elastic first ring.
3. (Withdrawn) The intervertebral disk prosthesis according to claim 1 or 2, wherein also encircling one of the second contact faces, a third groove is provided in which an elastic second ring in contact with the opposite contact face is embedded.
4. (Withdrawn) The intervertebral disk prosthesis according to claim 1, wherein the base plate and the top plate each have teeth on their outer edges extending vertically outwards away from the core to engage in an adjacent wall of a vertebral body.
5. (Withdrawn) The intervertebral disk prosthesis according to claim 1, wherein the base plate and the top plate are comprised of steel or titanium and the core is comprised of a body-compatible high molecular polyethylene synthetic material.

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6. (Withdrawn) The intervertebral disk prosthesis according to claim 3, wherein also encircling the opposite contact face, a corresponding fourth groove is provided in which the second ring in contact with the opposite contact face is embedded.

7. (Currently Amended) An intervertebral disk prosthesis for use in the vertebral column, comprising:

a base plate;

a top plate;

a core arranged in between the base plate and the top plate and being in contact with the base plate and the top plate, wherein the core is biconvex, having a convex surface on a side facing the top plate and a convex surface on a side facing the base plate, the convex surfaces forming sliding faces;

the top plate having a curved section in sliding engagement with the convex surface of the core facing the top plate;

the base plate having a curved section in sliding engagement with the convex surface of the core facing the base plate;

wherein the core comprises an upper body defining the convex surface on the side facing the top plate, a lower body defining the convex surface on the side facing the base plate and an annular intermediate elastic body between and separating the upper and lower bodies;

wherein the intermediate elastic body is configured to extend primarily in a plane generally perpendicular to the vertebral column; and

wherein the prosthesis is configured to replace the vertebral disk.

8. (Previously presented) The intervertebral disk prosthesis according to claim 7, the top plate having an outer edge and the base plate having an outer edge, wherein the base plate and the top plate each have teeth on their outer edges extending vertically outwards away from the core to engage in an adjacent wall of a vertebra in the vertebral column.

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9. (Withdrawn) The intervertebral disk prosthesis according to claim 7, wherein the base plate is cylindrical in shape to accommodate a cylindrical casing that is operable to be placed on the cylindrical base plate.

10. (Withdrawn) The intervertebral disk prosthesis according to claim 9, wherein the cylindrical casing has teeth located on one of its ends to engage an adjacent wall of a vertebral body.

11 - 13. (Cancelled).

14. (Original) The intervertebral disk prosthesis according to claim 7, wherein along a central axis extending from the base plate to the top plate a mandrel is provided to limit the relative movement between the base plate and the top plate about the central axis.

15. (Currently Amended) [[The]]An intervertebral disk prosthesis ~~according to claim 7, for use in the vertebral column, comprising:~~

a base plate;

a top plate;

a core arranged in between the base plate and the top plate and being in contact with the base plate and the top plate, wherein the core is biconvex, having a convex surface on a side facing the top plate and a convex surface on a side facing the base plate, the convex surfaces forming sliding faces;

the top plate having a curved section in sliding engagement with the convex surface of the core facing the top plate;

the base plate having a curved section in sliding engagement with the convex surface of the core facing the base plate;

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wherein the core comprises an upper body defining the convex surface on the side facing the top plate, a lower body defining the convex surface on the side facing the base plate and an intermediate elastic body between and separating the upper and lower bodies;

wherein the intermediate elastic body is configured to extend primarily in a plane generally perpendicular to the vertebral column;

wherein the prosthesis is configured to replace the vertebral disk; and

wherein the core has a bore extending from the base plate to the top plate and wherein a connecting sleeve is provided within the bore to engage the base plate and the top plate.

16. (Previously presented) The intervertebral disk prosthesis according to claim 15, wherein at least one screw is screwed into the connecting sleeve to connect the base plate, the top plate, and the core to each other.

17. (Withdrawn) An intervertebral disk prosthesis according to one of claims 1 to 16, wherein the contact faces of the base plate or the top plate are constructed as convex and the contact faces of the core are constructed as concave.

18. (Cancelled).

19. (Previously Presented) The intervertebral disk prosthesis according to claim 7, wherein the base plate is cylindrical in shape to accommodate a cylindrical casing that is operable to be placed on the cylindrical base plate.

20. (Previously Presented) The intervertebral disk prosthesis according to claim 19, wherein the cylindrical casing has two opposite ends and teeth located in one of its ends to engage an adjacent wall of a vertebral body.

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21. (Withdrawn) An intervertebral disk prosthesis for use in the vertebral column, comprising:

a base plate;

a top plate;

a core arranged in between the base plate and the top plate and being in contact with the base plate and the top plate, wherein the core is biconcave, having a concave surface on a side facing the top plate and a concave surface on a side facing the base plate, the concave surfaces forming sliding faces;

the top plate having a convex section in sliding engagement with the concave surface of the core facing the top plate;

the base plate having a convex section in sliding engagement with the concave surface of the core facing the base plate;

wherein the core comprises an upper body defining the concave surface on the side facing the top plate, a lower body defining the concave surface on the side facing the base plate and an intermediate elastic body between and separating the upper and lower bodies; and

wherein the intermediate elastic body extends primarily in a plane generally perpendicular to the vertebral column.

22. (Withdrawn) The intervertebral disk prosthesis according to claim 21, wherein the base plate and the top plate each have teeth on their outer edges extending vertically outwards away from the core to engage in an adjacent wall of a vertebra in the vertebral column.

23. (Withdrawn) The intervertebral disk prosthesis according to claim 21, wherein the base plate is cylindrical in shape to accommodate a cylindrical casing that is operable to be placed on the cylindrical base plate.

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24. (Withdrawn) The intervertebral disk prosthesis according to claim 23, wherein the cylindrical casing has two opposite ends and teeth located in one of its ends to engage an adjacent wall of a vertebral body.

25. (Withdrawn) The intervertebral disk prosthesis according to claim 21, wherein along a central axis extending from the base plate to the top plate a mandrel is provided to limit the relative movement between the base plate and the top plate about the central axis.

26. (Withdrawn) The intervertebral disk prosthesis according to claim 21, wherein the core has a bore extending from the base plate to the top plate and wherein a connecting sleeve is provided within the bore to engage the base plate and the top plate.

27. (Withdrawn) The intervertebral disk prosthesis according to claim 26, wherein at least one screw is screwed into the connecting sleeve to connect the base plate, the top plate, and the core to each other.

28. (Previously presented) The intervertebral disk prosthesis according to claim 7, wherein the curved section of the top plate is concave.

29. (Previously presented) The intervertebral disk prosthesis according to claim 7, wherein the curved section of the base plate is concave.